Title (en)

DEVICE AND METHOD FOR IMAGING OF NON-LINEAR AND LINEAR PROPERTIES OF FORMATIONS SURROUNDING A BOREHOLE

Title (de)

VORRICHTUNG UND VERFAHREN ZUR BILDGEBUNG VON NICHTLINEAREN UND LINEAREN EIGENSCHAFTEN VON FORMATIONEN UM EIN BOHRLOCH

Title (fr)

DISPOSITIF ET PROCÉDÉ DE MISE EN IMAGES DES PROPRIÉTÉS NON LINÉAIRES ET LINÉAIRES DE FORMATIONS ENTOURANT UN SONDAGE

Publication

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Application

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Abstract (en)

[origin: WO2012050880A2] In some aspects of the disclosure, a method and an apparatus is disclosed for investigating material surrounding the borehole. The method includes generating a first low frequency acoustic wave within the borehole, wherein the first low frequency acoustic wave induces a linear and a nonlinear response in one or more features in the material that are substantially perpendicular to a radius of the borehole; directing a first sequence of high frequency pulses in a direction perpendicularly with respect to the longitudinal axis of the borehole into the material contemporaneously with the first acoustic wave; and receiving one or more second high frequency pulses at one or more receivers positionable in the borehole produced by an interaction between the first sequence of high frequency pulses and the one or more features undergoing linear and nonlinear elastic distortion due to the first low frequency acoustic wave to investigate the material surrounding the borehole.

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